

### **REMARKS**

Claims 1-17 remain pending in this application. Claims 2 and 3 have been amended to correct the typographical error noted by the Examiner, and claim 17 has been amended to overcome the 35 U.S.C. § 101 rejection. Further reconsideration of this application is requested.

#### **35 U.S.C. § 101 Rejection**

The rejection of claim 17 under § 101 as being directed to non-statutory subject matter is traversed to the extent that this ground of rejection may be applied to claim 17 as amended herein. The claimed invention is directed to a computer-readable storage medium, which contains a data record readable by a computer, and which causes the computer to convert the data contained in the record into a DNA fingerprint that identifies a specific trait of the source of genomic DNA identified in the record.

Claim 17 now is in a form that provides a functional interrelationship between the descriptive material in the data record and a process of the computer that provides a practical application of the data record: namely, to produce a DNA fingerprint having practical application in the fields of genomics and biotechnology. As such, claim 17 now defines an article of manufacture (computer-readable storage medium) that has a practical application and that causes a computer to execute a specific process.

#### **35 U.S.C. § 112 1<sup>st</sup> Paragraph Rejection**

The rejection of claims 1-7, 9-14, 16 and 17 under the first paragraph of 35 U.S.C. § 112 is respectfully traversed. The Office action alleges that the specification “does not reasonably provide enablement for obtaining DNA fingerprint profile data through alignment by any other means” than the specific “spring-and-rubberband” binning algorithm provided as an example in the specification.

The enablement requirement, set out in the first paragraph of 35 U.S.C. § 112, is satisfied if the specification contains a description that enables one skilled in the art to make and use the claimed invention. See Bayer AG v. Schein Pharm., Inc., 301 F.3d 1306, 1314 (Fed. Cir. 2002) (enablement requirement ensures that one skilled in the art can make and use the claimed invention without extensive experimentation). There are

no additional requirements under the enabling requirement that the inventor describe multiple manners or methods to make and use the invention. The specification meets the enabling requirement if the description enables any mode of making and using the claimed invention. See Engel Indus. v. The Lockformer Co., 946 F.2d 1528, 1533 (Fed. Cir. 1991) (enablement requirement requires a description of any mode of making and using the claimed invention while best mode requirement requires disclosure of the best mode of making and using the claimed invention). Additionally, the specification does not have to disclose all possible variations of carrying out the invention. See Process Control Corp. v. Hydrex Corp., 190 F.3d 1350, 52 USPQ2d 1029 (Fed. Cir. 1999)(enablement requirement requires that the specification adequately discloses to one skilled in the relevant art how to make or how to carry out the claimed invention without undue experimentation).

The claims must only particularly point out and distinctly claim the subject matter which the applicant regards as his invention. It is not the function of the claims to recite "all of the details" set forth in the specification. See SRI International v. Matsushita Elec. Corp., 775 F.2d 1107, 227 USPQ 577 (Fed. Cir. 1985) (in banc)(it is not necessary to embrace in the claims or describe in the specifications all possible forms in which the claimed principle may be reduced to practice).

Here, the Examiner does not allege that the specification fails to provide a disclosure that adequately enables one skilled in the art to carry out the claimed invention. Instead, the Examiner appears to allege that because the claims omit the details of the binning algorithm set forth in the specification, they are non-enabled. This reasoning runs contrary to the established law on this issue. The claims must be read in conjunction with the specification to determine if they meet the requirements of § 112. See S3 Inc. v. nVIDIA, 259 F.3d 1364, 1367 (Fed. Cir. 2001) (if the claims when read in light of the specification reasonably disclose the scope of the invention, then the requirements of § 112 are met). Therefore, when looking at the claims themselves, the reader must read them in light of the specification. The Examiner failed to read the claims in light of the specification when determining if the requirements of § 112 were met. It is submitted that the specification provides a fully enabling disclosure such that the invention as set forth in each of claims 1-17 can be made and used by one of

ordinary skill in the art without any undue experimentation. The Examiner has failed to present any evidence to the contrary.

The Examiner failed to explain why a lack of "guidance, direction, or examples" of other possible algorithms adds the requirement of including all of the details from the specification into the claims. Although the Examiner lists the Wands factors to be considered in determining whether undue experimentation would be required, the Examiner has failed to present any Wands analysis at all in simply concluding that those of ordinary skill in the art would not be able to carry out the claimed invention without undue experimentation. Consequently, the non-enablement rejection is deficient on its face and should be withdrawn.

### **35 U.S.C. § 103 Rejection**

The present invention as claimed is directed to a novel method and product for obtaining DNA fingerprint profile data. According to the invention, raw marker fragment peak intensity data is classified into discrete intensity levels according to a predetermined scale, as shown in Fig. 2. The sizes of the fragments are then aligned into corresponding discrete size bins, as shown in Fig. 3B. The processed data is then entered into a data record in a sequence of peak intensities determined by the aligned sizes in the bins, as shown in Fig. 5 (sequence 509).

Contrary to the invention as set forth in claim 17, Ghosh fails to disclose a computer-readable storage medium having a DNA fingerprint data record stored therein, having an information field including an identification of the source of genomic DNA and a sequence field containing a sequence of classified peak intensity symbols such that when the storage medium is coupled to a computer and the computer reads the data record from the storage medium, the computer converts the sequence of classified peak intensity symbols into a unique DNA fingerprint that identifies a specific trait of the identified source of genomic DNA. Ghosh discloses methods of sizing of alleles across multiple gels, as shown in Figs. 2 and 3, both for intergel variation and for variations across sequencers. Ghosh does not classify peak intensities into discrete intensity levels according to a predetermined scale, nor does Ghosh assign peak

intensity symbols to observed peak intensities for storage as a sequence in a data record.

**Conclusion**

In summary, none of the prior art references of record discloses or suggests the novel method and product of the present application as set forth in the claims, whether considered individually or in any combination thereof. Favorable reconsideration of this application and the issuance of a Notice of Allowance are earnestly solicited.

Please charge any fee or credit any overpayment pursuant to 37 CFR 1.16 or 1.17 to Deposit Account No. 02-2135.

RESPECTFULLY SUBMITTED,					
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